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STUDY
PROJECT

STRATEGIC MOBILITY: CAN WE GET THERE IN TIME

BY

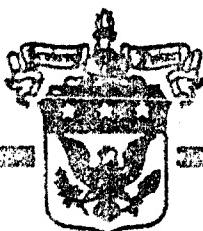
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USAWC MILITARY STUDIES PROGRAM PAPER

STRATEGIC MOBILITY: CAN WE GET THERE IN TIME

AN INDIVIDUAL STUDY PROJECT

by

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U.S. Army War College
Carlisle Barracks, Pennsylvania 17013
30 March 1990

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The dramatic changes in the world starting in the fall of 1989 will enable the United States to reduce its large military forces in Europe for the first time in 40 years. The collapse of communism and the decline of the Warsaw Pact military threat resulted from the inability of the communist system to provide for their people economically. Everyone agrees that there is no longer an imminent threat of a war in Europe between NATO and the Warsaw Pact. But before the United States dismantles its military forces, there is a need to look at the rest of the world. Ethnic struggles, nationalism, radical religious fundamentalism, terrorism, and insurgencies are occurring everywhere and especially in areas where the U.S. has vital interests and relations with friendly governments. Many Third World nations have large, modern, well-equipped armies and the predisposition to use them to achieve their political aims. More than ever the U.S. needs strategic mobility in the air and on the sea to be able to deter conflicts and exert its influence toward peace. This paper looks at the capabilities and requirements for strategic mobility and discusses ways to innovatively use the dwindling resources to achieve the greatest capability. With a dramatically smaller Army and fewer forces forward deployed around the world, the need for strategic airlift and sealift is increasing not decreasing. We need the planned production of the C-17 and to fund sufficient Fast Sealift Ships to move and sustain our contingency forces. The U.S. Merchant Marine industry is in steep decline and the country, not the military, must take action. To counter the inability of the military to count on civilian shipping to move 95%-99% of its requirements in a crisis, this paper looks at potential prepositioning alternatives and the need for an active, manned sealift capability.

TABLE OF CONTENTS

	page
ABSTRACT.....	ii
CHAPTER I. INTRODUCTION.....	1
Background.....	1
Defense Policy.....	2
Threat.....	3
II. CAPABILITIES AND REQUIREMENTS.....	7
Airlift.....	8
Sealift.....	10
Defining the Requirement.....	13
III. FUTURE DEVELOPMENTS AND INNOVATIONS.....	16
IV. CONCLUSIONS AND RECOMMENDATIONS.....	23
BIBLIOGRAPHY.....	26



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LIST OF ILLUSTRATIONS

	Page
Figure 1. Airlift Requirements Growth.....	8
2. U.S. Airlift Forces.....	9
3. U.S. Airlift Capability.....	9
4. Strategic Sealift Resources.....	13
5. DOD Airlift and Sealift Forces.....	13
6. Sealift Deployment.....	18

STRATEGIC MOBILITY: CAN WE GET THERE IN TIME?

CHAPTER I

INTRODUCTION

The United States is a continental power in its own right and has always thought of the oceans as its principal protection from invasion. However, as our commitments around the world require us to cross these same oceans quickly to come to the aid of our allies and friends and to protect our national interests, we must also think of ourselves as an island nation. These commitments have influenced our national strategy and defined our strategic mobility needs. This paper will examine our need for strategic mobility and discuss ways we can get the most out of our available resources.

BACKGROUND

Secretary of Defense, Frank C. Carlucci, in his Annual Report to Congress for Fiscal Year 1990, defined some of our major national security objectives:

- * "Safeguard the United States and its allies and interests by deterring aggression and coercion across the conflict spectrum; and should deterrence fail, by defeating armed aggression and ending hostilities on terms favorable to the United States and its allies.
- * Encourage and assist our allies and friends in defending

themselves against aggression, coercion, subversion, insurgency, terrorism, and drug trafficking.

- * Ensure access to critical resources, markets, the oceans and space for the United States, its allies, and friends."¹

The vast distances involved in meeting these objectives have helped shape our military strategy and created a tremendous demand for strategic mobility assets. The ability to get the right quantities of men and equipment to the critical place in time has plagued military planners since the beginning of time. In today's most likely scenarios, the critical period is measured in hours not weeks and months. It is safe to assume that there will never be enough mobility assets to totally satisfy the battlefield commander. Therefore, each potential threat/conflict must be analyzed correctly to judiciously allocate our limited mobility assets to meet pressing requirements. For this reason, in light of our current declining military budgets, it is imperative that we use our resources wisely and innovatively to get the greatest capability for the smallest investment.

DEFENSE POLICY

United States defense policy has been aimed at deterring aggression. "Deterrence works by persuading potential adversaries that the costs of their aggression will exceed any probable gains."² "To deter the Soviet Union, we must make clear to its leaders that we have the means and the will to respond

effectively to coercion or aggression against our security interests. While emphasizing our resolve to respond, our policy is to avoid specifying exactly what our response will be. This is the essence of our strategic doctrine of "flexible response", which has been United States policy since 1961."³

To implement our policy and develop a workable military strategy, we have forward deployed military forces around the world to cut down our reaction time, demonstrate our resolve, and minimize the burden on our mobility resources. Secretary Carlucci and the Joint Chiefs articulated the advantages and necessity of forward deployment in their annual reports to Congress. "We must also respond to aggression as far forward from our shores as possible. Forward basing also promotes efficient use of alliance resources; for example, by taking advantage of existing base facilities, we reduce airlift and sealift requirements to transport forces from bases in the United States."⁴ "In peacetime, the American presence among our allies reduces the coercive potential of Soviet and Soviet surrogate military threats and facilitates early reinforcement in crises."⁵ Where we cannot achieve forward deployment because of political reasons or cost considerations, we have prepositioned equipment in storage sites or aboard ships close to potential requirements.

THREAT

One year ago even the most optimistic planner could not have foreseen the dramatic events that have occurred in the

world. Eastern Europe has broken from the Soviet yoke and is seeking closer ties with the West. The Soviet Union economy is in dire straits and they are unilaterally reducing their armed forces. By 1991, there will be huge reductions in Soviet forces stationed in Eastern Europe as Poland, Hungary and Czechoslovakia call for the withdrawal of Soviet troops in their countries. The Conventional Armed Forces in Europe (CFE) talks combined with the withdrawal demands, and other unilateral force reductions in the Warsaw Pact will result in a lessening of tension in Europe and allow the withdrawal of some of the forward deployed U.S. forces. In his State of the Union message on 30 January 1990, President Bush proposed a cut in U.S. and Soviet European forces to 195,000 each. While this will take several years to execute, there is every reason to believe that the Soviets will agree. With equal forces, the threat of war in Europe will be almost unthinkable and the potential for global war greatly diminished.

Elsewhere in the world, the rise in regional tensions and conflicts will continue with the increased prospect of U.S. forces being committed in some form to protect our allies and interests. Drugs, terrorism, and insurgencies will be future threats. These threats fall on the low end of the spectrum of conflict and are called low-intensity conflicts. A low-intensity conflict is defined as a "political-military confrontation between contending states or groups, below conventional war but above routine peaceful competition among states. It involves protracted struggles of competing principles and ideologies. Low-

intensity conflict ranges from subversion to the use of armed force. It is waged by a combination of means employing political, economic, informational, and military instruments. Low-intensity conflicts are often localized, generally in the Third World, but contain regional and global security implications.⁶ Re-emerging ethnic conflicts, rising religious fundamentalism, increasing feelings of nationalism, and the desire for redefining borders drawn after the departure of the colonial powers will involve the United States politically, economically, emotionally, and possibly militarily. Panama was probably an atypical situation but we must be prepared to employ our military strength anywhere in the world.

Several significant factors do appear as we evaluate potential low-intensity conflict involvements. Our airpower and seapower will not face major challenges as most Third World nations do not possess the air and naval forces necessary to seriously threaten our control of the air and sea. They can inflict considerable damage if we are not careful as seen in the Persian Gulf and in the air strikes in Lebanon. Most importantly, we must travel tremendous distances to get to the critical place which requires strategic mobility and control of the air and sea lines of communication. Many Third World nations have purchased vast quantities of sophisticated military hardware including modern tanks, artillery, and missiles, and many of these nations have armed forces that are larger than ours. We have to ensure that any time we use our military for power projection that we provide sufficient forces to achieve the objective quickly.

ENDNOTES

1. Frank C. Carlucci, Report of the Secretary of Defense to the Congress on the FY1990/FY1991 Biennial Budget and FY 1990-94 Defense Programs, p.34.
2. Ronald Reagan, National Security Strategy of the United States, January, 1988, p.13.
3. Ibid, pp.13-14.
4. Carlucci, p.42.
5. The Joint Staff, United States Military Posture for FY1989, p.3.
6. Carlucci, p.43.

CHAPTER II
CAPABILITIES AND REQUIREMENTS

Every discussion of strategic mobility must come to grips with the need to express the requirements and capabilities of vastly different sizes and types of aircraft and ships in some common terms. Simplistically, we can add up the capability of each aircraft and ship available and express this as our capability in a unit of measurement like tons. On the requirements side, the total weight of everyone and everything to be moved can be totaled and divided into the capability figure for a percentage of needs fulfilled. Unfortunately, a host of additional factors must be considered including: surge rates versus sustainable rates, distance to be traveled, number of ports and airfields available and their capacities, materiel handling equipment for loading and unloading, refueling enroute requirements, rate of speed for each transport, the fact that many items are bulky but not heavy, fuel and time for return trips, maintenance and crew rest, and many others. No wonder transportation planners have gray hair and are hesitant to give definitive answers.

The requirements also change especially with the current force modernization program. The Army's M1 tank, Bradley Infantry Fighting Vehicle, and HUMMV are vastly superior to the equipment they replaced and also much heavier and bulkier. For example, the Army's requirement for airlift per division has grown faster than our growth in lift capability as seen in the following chart.¹

Airlift Requirements Growth			
/	Division Type	1980	1989(tons)/
/	Airborne	17,720	22,780
/	Inf/Light Inf	29,200	13,530
/	Mechanized	66,750	93,370
/	Armored	67,880	90,220

figure 1

AIRLIFT

The Congressionally Mandated Mobility Study in 1981 identified the need for additional long-range airlift capability and the Department of Defense established a 66 million ton-miles per day (MTM/day) goal, which was as much a fiscally constrained objective as it was a recognition of the requirement. ("A ton-mile is the ability to move one ton one mile by airlift."² For example, a 60 ton tank that is moved 3,500 miles consumes 210,000 ton-miles of airlift or 0.21 MTM). "At that time, the Air Force had approximately a 29 MTM/day capability."³ Much has been accomplished since 1981 including the purchase of 50 additional C-5s, 44 additional KC-10s, and the continued modification of civilian passenger aircraft to cargo-convertible configuration.⁴ This combination of military aircraft in the active and reserve forces augmented by modified aircraft in the

Civil Reserve Air Fleet(CRAF) has enabled the United States to achieve a capability of 47 MTM/day as seen in the following charts from a Joint Staff publication on FY89 military posture.⁵

US Airlift Forces

Military Aircraft

Type	Number**
	(Active/Reserve)
C-5	66/15
C-141	218/16
C-130	206/296
KC-10	56/10

Civil Reserve Air Fleet

Number**

Type	Number**
Domestic	34
Alaskan	11
Short-range International (passenger)	13
Short-range International (cargo)	4
Long-range International (cargo)	77
Long-range International (passenger)	253

* C-5, C-141, and KC-10s are jointly operated by Active and Reserve Associate Units

** Full Activation

US Intertheater Cargo Airlift Capability

(Funded)

Total MTM/D*

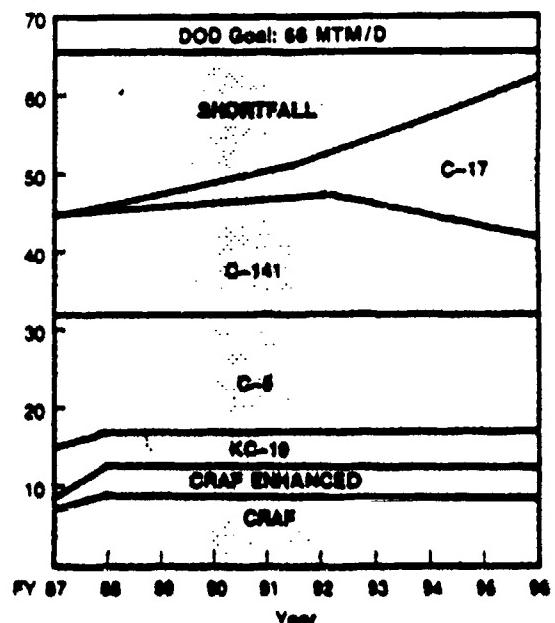


figure 2

figure 3

The key to achieving the 66MTM/day goal is the purchase of the C-17. Although airlift is extremely expensive with each C-17 costing approximately \$117 million, its inherent advantages are speed and flexibility. Starting from anywhere at anytime, men and materiel can be delivered to the crisis point anywhere in the world in hours. In a world where timing or surprise is crucial, airlift is our only option to forward deployed forces. The

ability to rapidly put combat forces on the ground around the world emphasizes our commitment to our allies.

SEALIFT

Even with our tremendous increase in airlift capability, 95% of our dry cargo and 99% of our fuel will move by sealift in any major overseas deployment.⁶ The vast quantities of sustaining supplies will also move by sea. In a typical example of a movement to Southwest Asia or the Middle East that is not part of a global war, the United States would need to "move about 800,000 tons of unit equipment - tanks, trucks, etc. - that would not fit into a container and over 1.7 million tons of resupply and ammunition during the surge and resupply operations."⁷ We must realize that this example is the most severe test of our lift capabilities - 7000 air miles and 12000 sea miles - but it is also an area where we have strategic interests. The Commission on Merchant Marine and Defense, more commonly known as the Denton Commission after its chairman, Senator Jeremiah A. Denton, held a series of meetings, starting in 1987, to determine the state of our Maritime capability and recommend changes to existing policies. The Commission findings shocked Congress and the Department of Defense and said in part:

*"The Commission has found clear and growing danger to the national security in the deteriorating condition of America's maritime industries.

*There is today insufficient strategic sealift, both ships and trained personnel, for the United States, using only its own resources..., to execute a major deployment in a contingency operation in a single distant theater...

*The Commission has concluded that there is no more militarily efficient, cost effective, and reliable way to provide the majority of the sealift requirement... than through an active United States flag merchant marine. The ships should be militarily useful and operating, engaged in peacetime in carrying commercial cargo, and manned by United States crews.

*The maritime industries have been in a state of decline for many years, but the rate of decline is now increasing at an alarming rate.

*The precipitous decline in the size of the United States merchant marine has been paralleled by a similar decline in the size of the merchant fleets of some of our most important allies.⁸

There are several band-aids that have been put on the problem. The Department of Defense has upgraded the military's sealift capability, and established a goal to move one million tons of equipment in a single lift.¹⁰ In sealift, we have procured and modified eight Fast Sealift Ships (FSS) which are capable of carrying an armored or mechanized division in a lift. The Ready Reserve Force (RRF) has been expanded to 91 ships and enough sea sheds and flat racks have been funded to convert 25 container ships to carry unit equipment.⁹ The National Defense

Reserve Fleet managed by the Department of Transportation is an aging fleet composed mainly of Victory ships from World War II but the critical factor is that there are not enough merchant marine seamen to crew all the available ships.¹¹

The "how" of the situation is as complicated as the many suggested solutions. It costs more to build ships in the U.S. so they are built elsewhere. Sailors from Third World countries will work for less pay and benefits, so they are hired to crew the ships. Other countries have lower taxes and less stringent safety requirements so the ships are flagged in the countries rather than the United States. And, finally, many countries for national pride, economic, or military reasons subsidize their merchant marine fleet so our US flag carriers cannot compete economically. In time of war will we be able to count on the United States owned but foreign flagged ships? During a global war, probably, but in a limited war there could be a major problem with the crews or the nation under which they are flagged.

As we continue to struggle for answers and solutions, the number of ships will continue to decline and the remaining ships, although larger, may not be suitable for military cargo, especially attempting to use container ships for unit equipment. The status of the different fleets is shown on the following charts from the Joint Staff's 1989 Military Posture publication¹² and with projections as currently funded from Secretary Cheney's January 1990 Report to the President and the Congress.¹³

Strategic Sealift Resources

(Funded)

<u>Non-Gov't Controlled Ships</u>	<u>Dry</u>	<u>Cargo</u>	<u>Tankers</u>
US Flag Merchant Ships	152	126	
Effective US Controlled (EUSC)	23	36	
Government Controlled Ships			
Military Sealift Command			
• Common User Ocean Transportation	10	22	
• Afloat Prepositioning Force (APF)			
Maritime Prepositioning Ships (MPS)	13		
Prepositioning Ships (PREPO Ships)	8	4	
• Reduced Operating Status (ROS)			
Fast Sealift Ships (FSS)	8		
Aviation Logistic Support Ship (TAVB)	2		
• Ready Reserve Force (RRF)	85	7	
Maritime Administration (MARAD)			
• National Defense Reserve Fleet (NDRF)			
NDRF Usual	50	16	
NDRF Victory Ships	88		
US Total	447	271	
Allied			
NATO Pool	400	61	
Other Flag Ship Pool	27	4	
Allied Total	427	65	
* Not intertheater assets			

As of 30 September 1987 FIGURE V-11

figure 4

**Department of Defense
Airlift and Sealift Forces Highlights**

	FY 1980	FY 1989	FY 1990	FY 1991
Intertheater Airlift (PAAs)				
C 5	70	110	110	110
C 141	234	234	234	234
KC 10	—	57	57	57
C-17	—	—	—	—
Intratheater Airlift (PAAs)				
C-130	482	492	450	444
C-123	64	—	—	—
C-7A	48	—	—	—
Sealift Ships, Active				
Tankers	21	29	28	27
Cargo	23	40	40	39
Sealift Ships, Reserved				
RRF	24	93	100	105
NDRF	—	120	120	118

* Primary aircraft authorized.

• Includes fast sealift ships, fleet prepositioned force ships, and common user (charter).

• Ready Reserve Force (assigned to 5-, 10-, or 20-day reactivation readiness groups).

• National Defense Reserve Fleet.

figure 5

Without a healthy Merchant Marine Industry, there will be a continuing problem with the availability of ships and seamen to augment our military capability in wartime. Today we are 20 percent short of our single lift sealift goal of one million tons and facing an uncertain future.¹⁴

DEFINING THE REQUIREMENT

This chapter started with an attempt to come to grips with a way to define requirements and capabilities in some common, easily understandable terms. The lack of success is also a reason why the Department of Defense has such a difficult time explaining to Congress the need for additional ships or aircraft. Unfortunately, because of the many variables, the DOD briefings

tend to produce lots of figures down to the last pound and aircraft sortie for a variety of options. It would appear that after the risks around the world have been analyzed, a strategy to deal with the potential risks would be devised. This strategy would define the force required in Army Brigades, Air Force Squadrons and Navy Battle Groups. The lift requirements could then be calculated and shortages identified with the associated risk. Of all the areas vital to our national interests, excluding Europe, it appears the access to oil in the Middle East would rank very high and be among the most taxing on our strategic lift capability. The strategy for dealing with threats to this vital interest would define the strategic lift required. It would then be up to the political process to weigh risk against resourcing the requirement. However, nothing is ever that simple. Dollars allocated to strategic lift must compete within the Department of Defense for priority. Each Service has programs which will be cut if strategic lift receives full funding so there are considerable differences of opinion concerning the requirements. Congress must weigh not only defense needs but the political aspects of each program before reaching its decision. Whatever the requirement, the end result must be a compromise.

ENDNOTES

1. Benjamin F. Schemmer, "Airlift, Sealift in Short Supply at Very Time Need Grows Fastest," Armed Forces Journal International, May 1989, pp. 66-68.
2. Thomas Cohoon, LTC, "Airlift - Reinforcing Europe," NATO's Sixteen Nations, June 1989, p. 57.
3. Steven E. Daskal, "Strategic Lift: The True Force Multiplier," Military Technology, November 1988, p. 108.
4. Frank C. Carlucci, Report of the Secretary of Defense to the Congress on the FY 1990/ FY 1991 Biennial Budget and FY 1990-94 Defense Programs, p. 172.
5. The Joint Staff, United States Military Posture for FY 1989, pp. 75-76.
6. Ibid.
7. The Commission on Merchant Marine and Defense, First Report, Findings of Fact and Conclusions, p. 20, (hereafter referred to as "First Report").
8. Ibid., pp. 1-2.
9. Carlucci, p. 172.
10. Dick Cheney, Report of the Secretary of Defense to the President and the Congress, January 1990, p. 49.
11. First Report, p. 50.
12. The Joint Staff, p. 77.
13. Cheney, p. 77.
14. Cheney, p. 50.

CHAPTER III
FUTURE DEVELOPMENTS AND INNOVATIONS

How to best use the dwindling resources for strategic lift remains the critical question. Neither the Air Force nor the Navy wants to continue diverting increasing percentages of their resources to strategic lift, resulting in fewer combat aircraft or ships available to meet their many other missions. We must be very smart in our use of resources. As the existing C-141 and C-5 fleets age, we have no rational alternative to meet airlift needs except through the purchase of the C-17. The need to move Army and Air Force units rapidly around the world has not decreased, in fact, it has increased as we have lost forward deployed bases. The combination of active, reserve, and civilian aircraft works and should remain in place as we continue on the glide path with the introduction of the C-17. The achilles heel of the airlift program is the lack of specialized Materiel Handling Equipment (MHE) for loading and unloading the large aircraft available today. MHE at both ends of the air bridge is the key to rapid, efficient operations.¹ Funding for the purchase of MHE should be a very high priority.

The potential for continued loss of forward bases and the validated requirement to move 95-99% of all supplies needed for a mid to high-intensity conflict by sea must occupy most of our attention. We were able to purchase eight Fast Sealift Ships (FSS) at a bargain price in the early 1980's because they were

too expensive to operate commercially.² These eight ships can carry an entire Army armor or mechanized division at 30 knots for an average trip to Europe of five and one half days or 17 days to the Middle East oil choke points. Unfortunately, there are not any more of these ships available. The construction of an additional eight ships would give us the capability to rapidly put two divisions anywhere in the world for an estimated cost of \$150 million each.³ In the 1990 defense budget, the Congress appropriated funds for four FSS cargo ships and two tankers.⁴ Unfortunately, the FY 1991 defense budget proposes to defer construction and when (read if) built these ships will be placed in the Ready Reserve Force(RRF). A valuable asset will sit idle and the nation must still deal with the requirement to man these ships on short notice during a crisis from a dwindling pool of trained merchant marine seaman. We need these ships active and fully mannned and, as will be seen later, there is a mission for them now.

There has been considerable discussion about Surface Effects Ships (SES) which could achieve speeds of 55 knots. The SES works by trapping air between twin hulls, like a catamaran. Air is forced between the hulls lifting the ship up in the water and enabling it to reach high speeds.⁵ Some of the drawbacks are that the technology for a ship of the size needed is unproven, the fuel consumption is enormous, and the travel time savings (see figure 6 below) would only be two days to Europe. The major savings are in loading/unloading which is part of the

design.⁶ Considering an estimated \$500 million for a prototype, the money might be better spent in constructing three FSS.

Sealift Deployment (Days)			
Mode	FSS(30kt)	SES(55kt)	/
/ Mvmt to port/Mob Ship	4.0	4.0	/
/ Load/Unload (Total)	4.0	1.0	/
/ Transit (3500nm)	4.2	2.2	/
/	12.9	7.7	/

figure 6

As the United States Navy either reduces its carrier fleet or replaces existing vessels, there is the unique opportunity to maintain these expensive ships for potential future needs by using them for sealift. The broad flight deck and cavernous hanger decks could carry a tremendous amount of Army and Air Force equipment, including helicopters and aircraft. The ships are paid for and should be maintained in the RRF anyway. During a low to mid-intensity conflict, they could rapidly deliver a load of equipment without modification and still be available for use as combat ships if there is any escalation.

The drawdown of Army units from Europe will make available more equipment than is needed to fill the six division sets in Prepositioned Materiel Configured in Unit Sets (POMCUS) for reinforcing Europe. Placing this equipment in POMCUS sites

several places around the world has its advantages, especially in being close to potential conflicts. The lack of countries willing to accept this equipment is a severe limitation, especially with the world-wide rise in nationalism. Additionally, the ability to get permission to come into the country and draw the FOMCUS for use elsewhere could be limited for political reasons. We have experienced this problem in the past and can expect greater difficulties in the future. However, the prepositioning of equipment aboard ships gives us maximum flexibility. The ships can be moved anywhere in the world without causing an international incident and their presence sends a clear message. Ships loaded with equipment indicates our intent without the threat to national prestige that the appearance of our fleet does when it appears off a country's shore. We must still maintain another set of equipment for the troops to train with but the equipment coming from Europe and the inactivating CONUS divisions' equipment is already paid for and enough is available for the smaller Army of the 90's. There are currently 13 ships already loaded with Marine equipment and another 12 ships with fuel, water and ammunition for the Army and Air Force. The advantages of these ships is that they are already loaded, manned and forward deployed. Imagine the capability and options the new PSS loaded with equipment either in U.S. ports or on station around the world would give the U.S. during a crisis.

Innovations in the use of specialized prepositioned ships are possible, especially in the Combat Service Support (CSS)

units for the Army Contingency Corps. In many Third World countries, the road and power infrastructure is extremely limited. The CSS elements needed to support the deployed units are expensive in terms of lift, represent a high threat potential for insurgents, are difficult to secure, and consume costly resources setting up and existing in underdeveloped areas. A FSS designed for a supply and maintenance operation could be operated from port and only offload those activities that must be close to the units. This concept would be ideal as a floating depot for repair parts and to do the sophisticated electronic maintenance required to support today's equipment. Carrying organic boats for ship-to-shore movement and helicopters for ferrying supplies, the ship could be mobile and stand off the coast if needed. The space vacated by the forward teams would be used to repair major assemblies in a "clean" area. Any mechanic who has ever worked in the mud can appreciate the savings time and effort this would accrue. We would only need one of these ships, prestocked with parts and equipment, actively mannned.

The Navy's ARAPAHO system requires the configuring of a unit to fit into standard shipping containers. This unit could then be deployed on existing container ships and perform its mission from either the ship or on shore without leaving the containers. The Army is currently looking at this concept for deployment of an aviation maintenance unit. The advantage is the ability to use existing commercial container ships which normally have limited military usefulness. There is a cost in

reconfiguring the units and the up front purchase of the shipping containers.

The Regional Conflict Working Group chaired by retired GEN Paul F. Gorman reported to the Commission on Integrated Long-Term Strategy on several other possible innovations.⁷ The difficulties with new technology are: it is expensive, there is the potential for unforeseen cost increases, and we can expect long lead times before construction. For example, the building of large floating offshore bases has considerable potential but must presume moderately good weather and will become a very attractive target. Obviously, strategic lift will have to compete with many other priorities for the available dollars. Also, in the future, it is entirely possible that new equipment will have to be tailored to fit existing lift limitations with the attendant trade-off with increased capability.

Ultimately, the solution for our total maritime strategic lift problem must come from a revitalization of the Merchant Marine Industry. It is just too expensive for the country to maintain these assets in the Department of Defense active forces or in the Department of Transportation reserve fleets, especially with the manpower problem. The Congress will have to decide it is in the national interest economically, militarily, and politically to support a strong commercial shipping industry.

ENDNOTES

1. Thomeas Cohoon, LTC, "Airlift - Reinforcing Europe," NATO's Sixteen Nations, June 1989, p. 59.
2. Kenneth M. Jenkins, COL, Enhancing Strategic Mobility: Applying Lessons From the Past, p. 11-12.
3. John A. Adams, "Balancing Strategic Mobility and Tactical Capability," Military Review, Vol. LXVII, No.8, August 1988, p.22.
4. Peter Koch, "A Lift for Lift," Army Times, 6 November 1989, p. 29.
5. Peter C. Kenny, MAJ, "A Transatlantic Express for Army Equipment," Armed Forces Journal International, October 1988, p.92-94.
6. Ibid.
7. The Commission on Integrated Long-Term Strategy, Regional Conflict Working Group, Supporting U.S. Strategy for Third World Conflict, Report, 30 June 1988, pp. 40-51.

CHAPTER IV
CONCLUSIONS AND RECOMMENDATIONS

Even before the echoes of the Berlin Wall falling and the downfall of the communist governments in key Warsaw Pact countries had quieted, there were calls by politicians in Washington to bring the troops home from Europe and to slash military spending. Everyone agrees that the threat of a global war with the Soviet Union starting in Europe has been dramatically lessened. However, the rest of the world is continuing to arm itself with sophisticated weapons and the potential instabilities resulting in threats to United States' interests are increasing. Overall troop strength can be reduced and defense spending lowered but it should be done deliberately to protect the morale of the people in the services and to insure key programs for the future are not arbitrarily terminated. If the United States is to remain a world power, it must be able to project its military power quickly around the world. There is a role for all the services in this national strategy. As the trend toward withdrawal from forward deployed bases continues in the 90's as a result of our budgetary problems and the worldwide increase in nationalism, we will need to depend even more on strategic mobility to protect our interests. As our forces continue to face ever more modern tanks, missiles, and guns around the world, we cannot lighten the deployable forces beyond a certain point without putting American troops unacceptably at

risk. Therefore, we must continue the planned modernization and increases in our strategic mobility fleets. The C-17 is absolutely critical to the airlift program from now until well into the next century. We need the C-17 in conjunction with existing aircraft to be able to move an Army Contingency Corps and supporting Air Force Squadrons to any of several potential areas of the world where U.S. vital interests are at risk. Along with the C-17, we need to invest in the materiel handling equipment which enables the most efficient use of the aircraft.

With the continued decline of our merchant marine industry, the continued purchase of Fast Sealift Ships (FSS) is critical. We need to be able to get our active CONUS based divisions to the crisis spot in a hurry and this can only be done with the FSS. The current planned construction of six ships (4 cargo and 2 tankers) coupled with the eight existing ships gives the United States a 1.5 division single lift capability. This is an excellent start and funding should be protected. The key to these ships is the maintenance of adequate trained seamen to man the ships at any time. Unless we address the decline in merchant marine seamen, there will be a major shortfall in the next few years. The prepositioning of equipment aboard ships should continue, especially as more equipment becomes available from the reduction in Europe. This mobile storage gives planners the greatest flexibility at the least cost. Development of specialized vessels for Combat Service Support and Aviation units also holds the promise of great efficiency.

The real key to military strategic mobility and in many ways the robustness of the entire U.S. economy is the revitalization of the U.S. flag merchant marine. We have lost control of our exports and imports. This puts us at a severe economic disadvantage and has the potential to cause a major national security deficiency unless the trend is reversed.

Can we get there in time? Today the answer is a heavily qualified "maybe", if the requirement is not too large or of long duration. Only a commitment to the future can keep the answer from changing to a "no" very soon.

BIBLIOGRAPHY

1. Adams, John A. "Balancing Strategic Mobility and Tactical Capability." Military Review, Vol. LXVII, No. 8, August 1988, pp. 9-23.
2. Carlucci, Frank C. Report of the Secretary of Defense to the Congress on the FY 1990/ FY 1991 Biennial Budget and FY 1990-94 Defense Programs. Washington: U.S. Department of Defense, 17 January 1989.
3. Cheney, Dick. Annual Report to the President and the Congress, January 1990. Washington: U.S. Government Printing Office. January, 1990.
4. Cohoon, Thomas. LTC. "Airlift - Reinforcing Europe." NATO's Sixteen Nations. Vol. 34, No. 3, June 1989, pp. 56-60.
5. Commission on Integrated Long-Term Strategy. Regional Conflict Working Group. Supporting U.S. Strategy for Third World Conflict. Report. Washington: U.S. Government Printing Office, 30 June 1988.
6. Daskal, Steven E. "Strategic Lift: The True Force Multiplier." Military Technology. No. 10/88, November 1988, pp. 107-112.
7. Jenkins, Kenneth M., LTC. Enhancing Strategic Mobility: Applying Lessons From the Past. Study Project. Carlisle Barracks: U.S. Army War College, 7 April 1989.
8. Kenny, Peter C., MAJ. "A Transatlantic Express for Army Equipment." Armed Forces Journal International. October 1988, pp. 92-96.
9. Koch, Peter. "A Lift for Lift." Army Times. 6 November 1989, p. 29.
10. Reagan, Ronald. National Security Strategy of the United States. Washington: The White House, January 1988.
11. Schemmer, Benjamin F. "Airlift, Sealift in Short Supply at Very Time Need Grows Fastest." Armed Forces Journal International. May 1989, pp. 66-68.
12. The Commission on Merchant Marine and Defense. First Report: Findings of Fact and Conclusions. Washington D.C., 30 September 1987.
13. The Joint Staff. United States Military Posture FY 1989. Washington: U.S. Department of Defense. Undated.